

REVIEW OF THE USE OF CONTRACEPTIVE METHODS AND FACTORS AFFECTING THE STRUCTURES OF BASNEF WOMEN IN AN IRANIAN SETTING

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ABSTRACT:

Background: To maintain the quality of service, the appointment of the target groups and proper education is the most important success factors in the implementation of family planning programs. In order to improve the quality of services, access to a variety of contraceptive methods and equipment, and the provision of advisory services and cultural sensitivity is important. Present studies apply theories and models of health education for the purpose of survey. So the aim of this study was to review the use of contraceptive methods and factors affecting the structures of BASNEF women in an Iranian setting.

Methods: In this cross-sectional survey conducted from July 1, 2012 to September 31, 2012, 216 women were chosen who did not use any contraceptive methods or followed the withdrawal method. These participants were chosen from the patients that come to (visit) health centers in Minoodasht, Iran. They were interviewed using the BASNEF questionnaire. Random sampling was continuous and Statistical methods to analyze data and analysis (frequency tables, chi-square and ANOVA) was used.

Results: The results indicated that the Spouse (90%) and families of the spouses (9/25%), are the decision makers for the effectiveness for women in decision-making of contraceptive method. Moreover, easy access (7/90%), effective training (2/53%) and appropriate environment (1/55%) are the important enabling factors.

Conclusions: According to the research, the Spouse, families and educational facilities in women, are effective factors in choice of contraceptive method. Thus effective interventions based on educational and other models are important factors in the case of use of contraceptive methods.

Key word: BASNEF model, Contraceptive Method, Withdrawal Method.

INTRODUCTION

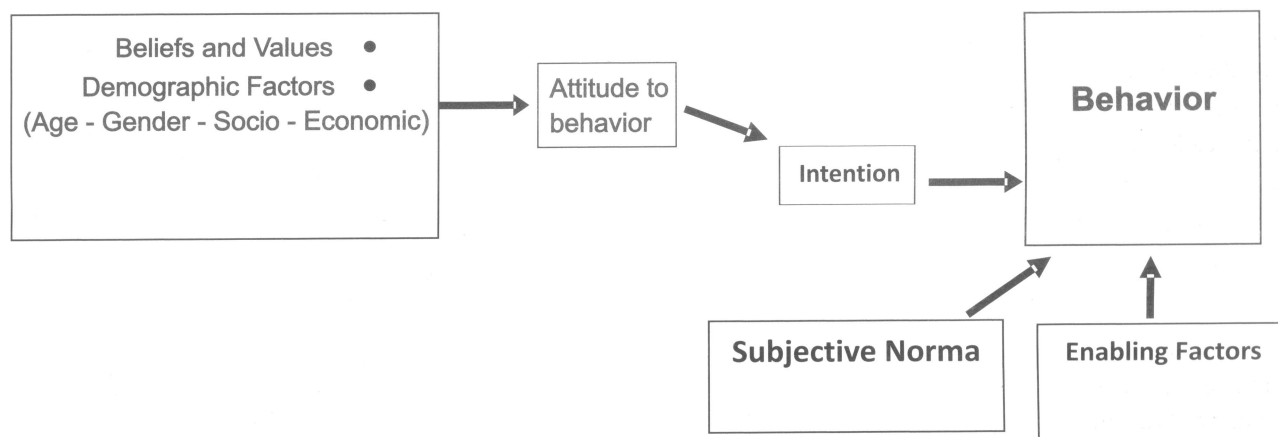
Rapid population growth is one of the serious problems in many developing countries. The negative impact of population growth causes economic, cultural and educational problems both on the family and in the community (WHO, 2012). Rapid population growth and ignorance about the social and economic development is important barrier against population health, particularly maternal and child health and survival (Moos, 2003). Family planning programs have a significant impact on

improvement of reproductive health and control of population, especially in developing countries (Bagheri, Abbaszade and Mehran, 2009). Unwanted pregnancies are one of the consequences resulting from lack of knowledge or lack of a reliable method of contraception (Moos, 2003). Such a situation affects physical, psychological, social, economic and detrimental conditions of the health of the mother and the child. Thus it is an alarm that emphasizes the need to examine factors associated with the use of safe and unsafe methods of

contraception (Bagheri, Abbaszade and Mehran, 2009). Nowadays, most of the pregnancies are not planned because of the lack of use of contraception, the use of ineffective methods of contraception, fear of complications, lack of access to health services (Matteson, *et al.*, 2006) lack of training, lack of continuity of contraceptive use and failure of contraceptive methods (Iñaki, 2007). Health problems associated with modern methods of contraception are the most common reason for using the traditional method in turkey (Yurdakul & Vural, 2002). The researches show that 70% of women in the reproductive age group who are sexually active, do not want to get pregnant, but 49% of them have unplanned pregnancy and 50% of pregnancies are terminated by several means (Hatami, 2006; Guillebaud, 2004). Unintended pregnancy is associated with negative outcomes such as maternal mortality, complications from illegal and unsafe abortion, delayed initiation of prenatal care, low birth weight, increased risk of smoking, alcohol

of behavior which is used for the planning of behavior change, determining factors in the decision to treat patients. According to this model, when a person does an act that would benefit him (Person's belief and evaluation of treatment outcomes), then, the assessment of the person's behavior shapes attitudes (Attitude to behavior). Parallel to this, important people in one's life can affect the person's recent behavior and act as a barrier or a facilitator towards behavior (subjective norms). Person's subjective norms are determined by normative beliefs because important people will determine the approval or rejection of the behavior. The combination of attitude and subjective norms are result in individual's decision to adapt to new behavior (intention). But in the meantime, factors such as skill, money, cost, etc., can be effective in changing intention to behavior. These must already exist to be treated (enabling factor) (Didarloo, Shojazade and Mohamadian, 2009; Safari, *et al.*, 2009).

SCHEMATIC DESIGN OF BASNEF



consumption, reducing in the likelihood of breastfeeding and the high risks for infant (Begum, *et al.*, 2010). Models of behavior help to understand the attitudes of people toward health behaviors. There are many barriers against the behavior change, such as cultural norms and standards. Thus training theory and model are necessary to identify the factors responsible for determining its compliance with social and cultural structures (Didarloo, Shojazade and Mohamadian, 2009). For successful change in health behavior, health educators should be aware of the factors affecting the formation of a behavior.

BASNEF (Belief, Attitude, Subjective Norm, and Enabling Factors) is a comprehensive model for the study

As research work is limited regarding behavior-based family planning on basis of BASNEF model in this area, the purpose of the study was to review the use of contraceptive methods and factors affecting the structures BASNEF women in an Iranian setting.

DESIGN AND METHODS

This cross-sectional survey was carried out with 216 women who did not use any contraceptive methods or followed the withdrawal method. The inclusion criteria included married Iranian women, Muslim, in reproductive age group, healthy without any diagnosed disease, women without any contraindications of usage of contraceptive

methods or using withdrawal, unwillingness to pregnancy and literacy. The subjects come to (visit) health centers in Minoodasht, Iran, from July 1, 2012 to September 31, 2012, and were interviewed using BASNEF questionnaire. Exclusion criteria included divorcee or widow. We used a demographic questionnaire to obtain the age, duration of marriage, education and career, woman and their spouse, number of pregnancies, childbirth, abortion, history of previous deliveries, unwanted pregnancy, history of contraception and economic conditions. The present study included BASNEF questionnaire which included six parts: as i. knowledge (7 questions), ii. attitudes (11 questions), iii. subjective norm (5 questions), iv. enabling factors (7 questions), v. intention (2 questions) and vi. performance (a question).

In this study, to check the validity, the questionnaire has given to thirteen Faculty members of Nursing and Midwifery, Tehran University of Medical Sciences and Baghiatollah University. After the estimation of its validity, its reliability was measured by the Cronbach's alpha coefficient test. The questionnaire was administered to 20 women with the inclusion criteria and then Cronbach's alpha coefficient was calculated which was 84%.

The Ethical Committee of Tehran University of Medical Sciences' Faculty of Nursing and Midwifery approved the study; and all participants gave their informed consent to be interviewed.

The data were analyzed using SPSS software, version 16. The characteristics of the participants are presented as mean±SD or number and percentage.

Statistical methods to analyze data and analysis frequency tables, chi-square and ANOVA) was used.

RESULTS

A total of 197 participants declared that the Spouse (90%) and families of the spouses (9/25%), are one of the most effective subjective norms for women in decision-making about the choices of contraceptive method. The socio-demographic data of the 216 participants are summarized in the following tables.

According to Table 1 (Frequency distribution of demographic characteristics of participants), the mean age of women was 27/40 ± 6/123, duration of marriage 1/

92 ± 1/166, gravid 1/48 ± 1/254, parity 1/28 ± 1/085. The 88.4% percent of women were housewives, 20.8% percent have primary school education, 15.7% percent of women had unwanted pregnancy, 53.2% percent of women had used contraceptive methods, and 34.3% percent of previous delivery was NVD (Normal Vaginal Delivery).

Table 1: Demographic status of a sample of women living in Minoodasht city:

Demographic status		Prevalence (%)	M ± SD
Women age	15-19	18 (8/3)	27/40 ± 6/123
	20-24	66 (30/6)	
	25-29	57 (26/4)	
	30-34	49 (22/7)	
	35-39	12 (5/6)	
	40-44	14 (6/5)	
Marriage age	1-5	110 (50/9)	1/92 ± 1/166
	5-10	49 (22/7)	
	10-15	33 (15/3)	
	15-20	13 (6)	
	20-25	11 (5/1)	
Mother education	bisavad	16 (7/4)	-----
	primary	45 (20/8)	
	High school	57 (26/4)	
	diploma	71 (32/9)	
	collegiate	27 (12/5)	
Women job	Homey	191 (88/4)	-----
	Employed	25 (11/6)	
Gravida	no	48 (22/2)	1/48 ± 1/254
	One	77 (35/6)	
	Two	51 (23/6)	
	Three	27 (12/5)	
	Four=<	13 (6/1)	
delivery	no	50 (23/1)	1/28 ± 1/085
	One	92 (42/6)	
	Two	52 (24/1)	
	Three	12 (5/6)	
	Four=<	10 (4/6)	
Previous delivery	No delivery	52 (24/1)	-----
	C/S	82 (38)	
	NVD	74 (34/3)	
	both	8 (3/7)	
Previous unwanted pregnancy	yes	34 (15/7)	-----
	No	182 (84/3)	
Previous contraception	yes	115 (53/2)	-----
	No	101 (46/8)	
Total	-----	216 (100)	-----

The p values were tested using the Chi-square, Anova.

There were associations, between the education of women ($p=0.009$), age ($p=0.000$), duration of marriage ($p=0.003$) and gravid women ($p=0.028$). There was also association between age ($p=0.013$) and duration of marriage ($p=0.040$) and attitude. Between previous use of contraception ($p=0.013$) and unwanted pregnancy ($p=0.023$), age ($p=0.051$), and subjective norms. Association was also noted between unwanted pregnancy ($p=0.003$) and other enabling factors along with structures of BASNEF, knowledge ($p=0/000$) and attitude ($p=0/019$), subjective norms, attitude ($p=0/01$, $p=0/028$, $P=0/047$) and subjective norms and attitude ($p=0.047$) and intention ($P\leq 0.05$) (Table 2).

There were no significant associations between

education of women, age, and duration of marriage, gravid period with other Structures of BASNEF like age, parity, and previous delivery (Table 1). 43.3% of women had poor knowledge, 15/7% intermediate and 6.4% percent of them had good knowledge. Attitude towards in women showed 45.2% with poor approaches and 16.9% percent showed good attitudes.

DISCUSSION

BASNEF model, examined various factors affecting the adoption or non-adoption of a health behavior. It is an important model, which helped to ascertain that beliefs, attitudes, and behavior evaluation results made by the individual's performances in the case of planning and preparation for change and stability of individual behavior.

Table 2: Comparison of component of BASNEF model in women:

Component of basnef model		N	%	
Knowledge	bad	106	1/49	
	moderate	90	6/41	
	good	20	25/9	
Attitude	bad	94	43/51	
	good	122	56/48	
Subjective Norms	Good relationship	207	95/8	
	Disagreement with contraception	60	27/8	
	agreement husband with contraception	167	77/3	
	Effective personal in decision	husband	197	91/2
		Husband family	21	9/7
		Her family	35	16/2
		freinds	2	0/9
		Health worker	44	20/4
other	12	5/6		
EnablingFactors	accessibility	196	90/70	
	Previous of effective training	115	53/2	
	Family planning information	family	31	14/4
		Health worker	160	74/1
		freinds	10	6/4
		NGO organization	48	22/2
		Book,pamfelate,film	46	21/3
		Media,internet	34	15/7
	barriers	distance	55	25/5
		Time limits	53	24/5
		Lack of education	69	31/9
		Lack of staff	70	32/4
		Space limitation	119	55/1
Intention	Tendency of contraception	24	11/1	
	Tendency of pregnancy	139	64/4	
	Tendency of contraception after 6 months	29	13/4	
Total	-----	312	100	

The p values were tested using the Chi-square, ANOVA

Indeed it is regarded that Normative beliefs and subjective norms lead to the decision for change and continuity is desired for this changed behavior (Rahayu 2009). Women in our study had low scores with respect to knowledge and attitude which might have been influenced by literacy level. Though other studies indicated that there is strong association between attitude and level of education, but in this particular study there was no significant relationship between attitude and level of education.

Recent research demonstrated that the knowledge with attitude and subjective norm are associated with each other. Also, there are significant associations between duration of marriage, age, previous use of contraception, previous unwanted pregnancy and attitude. Rahayu and associates (2009) concluded that, almost all of the selected characteristics have a significant relationship with contraceptive use. Women's age, place of residence, number of living children, women's education, religion, desire for more children, visit by family planning worker, and husband's view on family planning had significant relationships with modern method use of contraception. Interestingly, the number of living children, religion, and the husband's view on family planning no longer had a significant relationship when only long-term method use was considered. The results indicate that women's education is one of the most important factors related to contraceptive use.

Sommer *et al.*, (2011) reported that TPB is clearly a well-founded, sound theory which can explain considerable proportions of intention and behavior of individuals. From this brief discussion, several aspects relevant to TPB need to be highlighted. Generally, information processing seems to be relevant when talking about developing the intention to perform a specific behavior and plans to implement it. Basically, human decision making should involve becoming aware of the problem, gathering and analyzing information and making the decision. Hamilton *et al.*, (2011), highlighted the importance of attitudes, normative influences, and individual characteristics in the case of complementary feeding decision-making which should be considered when designing interventions aimed at improving adherence to current maternal feeding guidelines.

In this study the findings of the investigation, about knowledge, attitude and subjective norms, and also duration of marriage, age, and previous use of contraception is aligned. A significant relationship was

noticed between subjective norms, husband and their families and the use of contraception. But there were no significant association with the influence of health workers and the use of contraception among the women population. This showed that female relatives are important in the decision-making regarding the choice of contraception. This is consistent with studies by Charkazi *et al.*, (2012) which showed a strong association between knowledge, behavior, support and encouragement of spouse, mother, and mother in law as subjective norms in breastfeeding.

Hazavehei and associates study in 2011 represented that there are relations, between attitude, intention and enabling factors with direct association, between knowledge, intention and enabling factors. Heshmati *et al.*, (2011) reported that, subjective norms and enabling factors are the most important criteria in the formulation any kind of behavior (smoking). So, special attention should be given to the importance of these factors in setting the programs of quit smoking along with its prevention.

The results showed that changes can be brought about if there is adequate space, trained staff, facilities and resources to teach, so as to increase awareness. But in the case of the present study there was not significant connection between these enabling factors and choice of contraceptive methods. Though in this respect it can be said that results of Sharifirad *et al.*, (2010) showed that instruction and intervention based on BASNEF structures has significant positive impact on maternal behavior.

Results of researches are consistent with recent research that revealed associations between educations, duration of marriage, age, knowledge with the attitude of the subject. But these enabling factors of this research may not match with the Iranian studies with different facilities and cultural conditions. According to the previous studies, enabling factors could affect the attitude changes (Lee 2001; Mohamaei, Noohi and Maleki 2001; Baghiani-Moghadam *et al.*, 2005)

CONCLUSION

So, the aim of this study was to help mothers choose seriously the contraceptive method and finally aids in the promotion of maternal health. By improving Effective Training and providing guidelines for attitude change can bring about changes in the behavior of the women

population. Recognition of the subjective norms affects women's choice of birth control decision. Increase in the investment of women's education and their spouses and families can spread awareness and helps in the shaping

up of attitude. Action is useful when accompanied with proper planning which affected the subjective norms (spouse, family) and enabling factors besides knowledge and attitude.

REFERENCES

- Abdollahman, C, Zeynab MS, Hosein S, Akbar H & Taghi BM (2010). Breast Feeding Status During The First Two Years Of Infants' Life and its Risk Factors Based on Basnef Model Structures in Isfahan. *Health System Research Summer*, 6(2), pp 0-0.
- Bagheri, A, Abbaszade F & Mehran, N (2009). Contraceptive methods in over 35-year old women and their related factors in Kashan, 2007. *Feyz, Kashan University of Medical Sciences & Health Services*, 1(13), pp 48-54.
- Baghiani-Moghadam MH SF, Haydarnia AR & Afkhami M (2005). Efficacy of BASNEF model in controlling of diabetic patients in the city of Yazd, Iran. *Indian J Community Med*. 30(4), pp 144-145.
- Begum, S, Dwivedi, SN, Pandey, A & Mittal, S (2010). Association between domestic violence and unintended pregnancies in India: findings from the National Family Health Survey-2 data. *The National Medical Journal of India*, 23(4), pp 198-200.
- Charkazi, A, Heshmati, H & Neirizi, O (2012). Explaining Smoking among Students at Golestan University of Medical Sciences Based on BASNEF Model (Text in Persian)
- Didarloo, A, Shojazade, D & Mohamadian, H (2009). *Health Promotion Planning*. Tehran. Asaresobhan, p 77.
- Guillebaud, J (2004). *Contraception: Your Questions Answered Fourth Edition*; Page 142, Churchill Livingstone.
- Hamilton, K, Daniels, L, White, KM, Murray, N & Walsh, A (2011). Predicting mothers' decisions to introduce complementary feeding at 6 months. An investigation using an extended theory of planned behaviour. 56(3), pp 674-81.
- Hatami, H (2006). Epidemiology of Brucellosis. In: Hatami H, Razavi SM, Eftekhari AH. *Textbook of Public Health*. 2nd ed. Tehran; Arjmand Publishers, pp 1206-13.
- Hazavehei, SMM AZ rZ, Heshmati, H, Dehnadi, A & Hasanzade, H (2011). Related Factors to Educational Behaviors of Health Volunteers about Cutaneous Leishmaniasis on the Basis of BASNEF Model in Yazd. *Journal of Ardabil health*. 3(1).
- Heshmati, Hashem RZ, Hazavehei Seid Mohammad Mehdi, Dehnadi Anita & Hasanzadeh Akbar (2011). Related Factors to Educational Behaviors of Health Volunteers about Coetaneous Leishmaniasis on the Basis of BASNEF Model in Yazd. *Journal of Ardabil health*. 1(3), pp 48-56.
- Hong, RML & Mishra, V (2006). Family planning services quality as a determinant of use of IUD in Egypt. *BMC Health Serv Res*. 6, pp 79.
- Iñaki, L (2007). Factors affecting women's selection of a combined hormonal contraceptive method. the TEAM-06 Spanish cross-sectional study *Contraception*, 76, pp 77-83.
- Lee, SG & Bae, SS (2001). The relationship between treatment intention and compliance in newly detected hypertensive patients. *Korean J Prev Med. [Korean]*. 34(4), pp 417-26.
- Matteson, KA, Peipert, JF, Allsworth, J, Phipps, MG & Redding, CA (2006). Unplanned pregnancy: does past experience influence the use of a contraceptive method? *Obstet Gynecol*, 107(1), pp 121-7.
- Mohamaei, F NTM, Noohi, F & Maleki, M (2004). Application of BASNEF health belief model in preventing the occurrence of risk factors contributing to myocardial infarction in patients with coronary artery disease. *Iranian Heart J [Persian]*. 5(1-2), pp 29-32.
- Moos, MK (2003). Unintended pregnancies. A call for nursing action *MCN, American Journal of Maternal/Child Nursing*, 28(1), pp 2-30.

- Rahayu, R (2009). Contraceptive Use Pattern among Married Women in Indonesia, the International Conference on Family Planning. Research and Best Practices. November 15-18.
- Safari, M, Shojaeizadeh, D, Ghofranipour, F & Heydarnia, A (2009). Pakpour-HajiAga A. Health education & promotion: theories, models & methods. Tehran: Sobhan [In Persian].
- Sharifirad GR GP, Shahnazi H, Barati M, Hasanzadeh A, Charkazi AR, et al (2010). The impact of educational program based on BASNEF model on breastfeeding. Behavior of pregnant mothers in Arak. Arak Medical University Journal. 13(1), pp 63-70.
- Sommer, L (2011). The Theory Of Planned Behaviour And The Impact Of Past Behaviour. International Business & Economics Research Journal, 10(1).
- WHO (2012). Family planning. World Health Organization, Geneva.
- Yurdakul, M & Vural, G (2002). Reasons for using traditional methods and role of nurses in family planning. Cotraception, 65(5), pp 347-50.